

**ABSTRACT****FREE FLOW ELECTROPHORESIS MICROCHIP, SYSTEM AND METHOD**

5 The present invention relates to a free flow electrophoresis microchip for the electrophoretic separation of charged components, a free flow electrophoresis separation system incorporating the same, and a free flow electrophoresis method of separating charged components, the microchip comprising: a separation chamber in which charged components are in use separated; a plurality of separation medium inlet channels having  
10 outlets fluidly connected to one, inlet side of the separation chamber through which flows of a separation medium are in use introduced into the separation chamber such as to develop a laminar flow having a flow direction through the separation chamber; a sample inlet channel having an outlet fluidly connected to the inlet side of the separation chamber through which a flow of a sample containing charged components is in use  
15 introduced into the separation chamber; a plurality of outlet channels having inlets fluidly connected to another, outlet side of the separation chamber opposite the inlet side thereof; and a magnetic field unit for providing a magnetic field substantially orthogonal to the flow direction of the separation medium; whereby charged components introduced into the separation chamber are deflected laterally across the separation chamber in  
20 dependence upon the charge, typically the electrophoretic mobilities or the iso-electric points, of the charged components.

[Figure 1]